

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: CHAPIN POND	Lake Area (ha): 4.90
Town: NEWPORT	Maximum depth (m): 4.5
County: Sullivan	Mean depth (m): 1.9
River Basin: Connecticut	Volume (m ³): 93500
Latitude: 43°25'04" N	Relative depth: 1.8
Longitude: 72°16'04" W	Shore configuration: 1.27
Elevation (ft): 1590	Areal water load (m/yr): 5.78
Shore length (m): 1000	Flushing rate (yr ⁻¹): 3.00
Watershed area (ha): 55.4	P retention coeff.: 0.63
% watershed ponded: 0.0	Lake type: natural w/dam

BIOLOGICAL:

3 March 1993

4 August 1992

DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 60%	ANABAENA 55%
	#2	XANTHIDIUM 15%	XANTHIDIUM 25%
	#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)			410
CHLOROPHYLL-A (µg/L)			0.71
DOM. ZOOPLANKTON (% TOTAL)	#1	CILIATE SPP. 42%	CALANOID COPEPODS 85%
	#2	CALANOID COPEPODS 25%	KERATELLA 13%
	#3	KERATELLA 25%	
ROTIFERS/LITER		13	26
MICROCRUSTACEA/LITER		19	174
ZOOPLANKTON ABUNDANCE (#/L)		53	200
VASCULAR PLANT ABUNDANCE			Abundant
SECCHI DISK TRANSPARENCY (m)			4.5 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)		4.6	8.8
BACTERIA (E. coli, #/100 ml)	#1		< 1
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m³): None
Anoxic volume (m³): None

CHEMICAL:

Lake: CHAPIN POND
Town: NEWPORT

	3 March 1993		4 August 1992		
DEPTH (m)	1.0	3.0	1.0		3.0
pH (units)	5.8	5.7	6.2		6.0
A.N.C. (Alkalinity)	1.5	1.5	0.9		0.8
NITRATE NITROGEN	< 0.02	< 0.02	< 0.02		< 0.02
TOTAL KJELDAHL NITROGEN			0.15		0.14
TOTAL PHOSPHORUS	0.004	0.004	0.009		0.006
CONDUCTIVITY (μ mhos/cm)	26.6	26.6	15.2		15.2
APPARENT COLOR (cpu)	36	38	5		5
MAGNESIUM			0.33		0.32
CALCIUM			1.0		
SODIUM			0.8		
POTASSIUM			0.12		
CHLORIDE	< 3	< 3	< 3		< 3
SULFATE	4	4	4		4
TN : TP			17		23
CALCITE SATURATION INDEX			5.2		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1992

D.O. S.D. PLANT CHL TOTAL CLASS

**	1	5	0	6	Meso.
----	---	---	---	---	-------

COMMENTS:

1. Pond was accessed via a very rough 4-wheel drive road.
2. Very clear water with plants along the bottom -- nice trout pond.
3. Beaver dam controls the water level; water level was above the natural level; many erect dead trees in the water as much as 10 feet out from the current shoreline.
4. A number of dead trees had fallen in the water; some old wooden boats were sunk on the bottom.
5. The desmid Closterium (80%) was the dominant wholewater phytoplankton.

Chapin Pond

Newport

N



111-52

5

10

15

5 foot depth contours

0

0.1

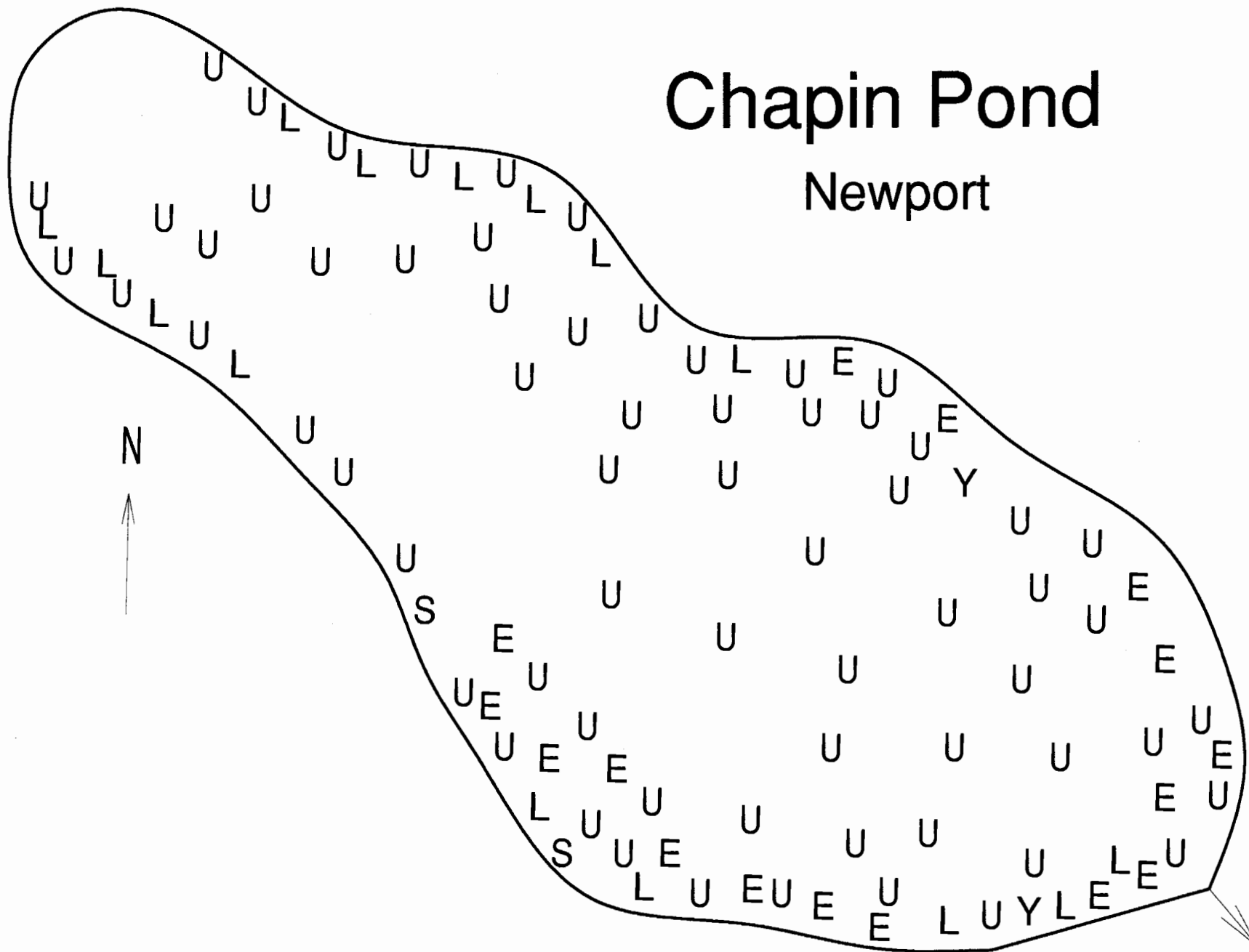
Km



[illegible]

Chapin Pond

Newport



0 0.1
Km

111-54

AQUATIC PLANT SURVEY

LAKE: CHAPIN POND

TOWN: NEWPORT

DATE: 08/04/92

[illegible]

OVERALL ABUNDANCE: Abundant

GENERAL OBSERVATIONS:

1. Bladderwort was abundant but it was mostly along the pond bottom (only a few small clumps were observed floating at the surface).
2. Plants were not a problem to navigation or aesthetics.
3. Two beaver lodges observed; saw many frogs and salamanders; freshwater sponges also present.